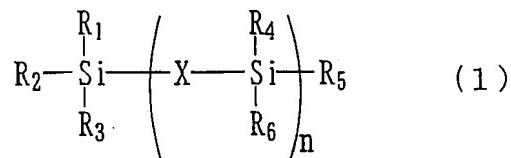


CLAIMS

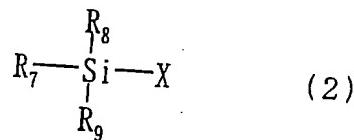
1. A nonaqueous electrolyte composition comprising an organic solvent and an electrolyte salt dissolved in the organic solvent, the organic solvent being a mixed organic solvent comprising (a) 20% to 35% by volume of ethylene carbonate, (b) 35% to 45% by volume of ethyl methyl carbonate, (c) 15% to 35% by volume of dimethyl carbonate, and (d) 3% to 15% by volume of diethyl carbonate or propylene carbonate.
2. The nonaqueous electrolyte composition according to claim 1, wherein the organic solvent comprises (a) 25% to 35% by volume of ethylene carbonate, (b) 35% to 45% by volume of ethyl methyl carbonate, (c) 18% to 32% by volume of dimethyl carbonate, and (d) 3% to 10% by volume of diethyl carbonate or propylene carbonate.
3. The nonaqueous electrolyte composition according to claim 1 or 2, wherein the organic solvent comprises (a) 30% by volume of ethylene carbonate, (b) 40% by volume of ethyl methyl carbonate, (c) 20% by volume of dimethyl carbonate, and (d) 10% by volume of diethyl carbonate.
4. The nonaqueous electrolyte composition according to claim 1 or 2, wherein the organic solvent system comprises (a) 25% by volume of ethylene carbonate, (b) 40% by volume of ethyl methyl carbonate, (c) 30% by volume of dimethyl carbonate, and (d) 5% by volume of diethyl carbonate.
5. The nonaqueous electrolyte composition according to claim 1 or 2, wherein the organic solvent system comprises (a) 25% by volume of ethylene carbonate, (b) 40% by volume of ethyl methyl carbonate, (c) 25% by volume of dimethyl carbonate, and (d) 10% by volume of diethyl carbonate.

6. The nonaqueous electrolyte composition according to claim 1 or 2, wherein the organic solvent system comprises (a) 25% by volume of ethylene carbonate, (b) 40% by volume of ethyl methyl carbonate, (c) 30% by volume of dimethyl carbonate, and (d) 5% by volume of propylene carbonate.
7. The nonaqueous electrolyte composition according to claim 1, 2 or 3, wherein the electrolyte salt is at least one member selected from LiPF₆, LiBF₄, LiClO₄, LiAsF₆, LiCF₃SO₃, LiN(CF₃SO₂)₂, LiC(CF₃SO₂)₃, a derivatives of LiCF₃SO₃, a derivative of LiN(CF₃SO₂)₂, and a derivative of LiC(CF₃SO₂)₃.
8. The nonaqueous electrolyte composition according to claim 1, 2 or 4, wherein the electrolyte salt is at least one member selected from LiPF₆, LiBF₄, LiClO₄, LiAsF₆, LiCF₃SO₃, LiN(CF₃SO₂)₂, LiC(CF₃SO₂)₃, a derivatives of LiCF₃SO₃, a derivative of LiN(CF₃SO₂)₂, and a derivative of LiC(CF₃SO₂)₃.
9. The nonaqueous electrolyte composition according to claim 1, 2 or 5, wherein the electrolyte salt is at least one member selected from LiPF₆, LiBF₄, LiClO₄, LiAsF₆, LiCF₃SO₃, LiN(CF₃SO₂)₂, LiC(CF₃SO₂)₃, a derivatives of LiCF₃SO₃, a derivative of LiN(CF₃SO₂)₂, and a derivative of LiC(CF₃SO₂)₃.
10. The nonaqueous electrolyte composition according to claim 1, 2 or 6, wherein the electrolyte salt is at least one member selected from LiPF₆, LiBF₄, LiClO₄, LiAsF₆, LiCF₃SO₃, LiN(CF₃SO₂)₂, LiC(CF₃SO₂)₃, a derivatives of LiCF₃SO₃, a derivative of LiN(CF₃SO₂)₂, and a derivative of LiC(CF₃SO₂)₃.
11. The nonaqueous electrolyte composition according to claim 1, 2, 3 or 7, further comprising at least one member selected from a silicon compound represented by

general formula (1) and a silicon compound represented by general formula (2):



wherein R_1 , R_2 , R_3 , R_4 , R_5 , and R_6 each represent an alkyl group, an alkoxy group, an alkenyl group, an alkenyloxy group, an alkynyl group, an alkynyloxy group, an aryl group or an aryloxy group, each of which may have an ether bond in its chain; n represents 0 to 5; when n is 1 to 5, X represents a single bond, an oxygen atom, an alkylene group, an alkylenedioxy group, an alkenylene group, an alkenylenedioxy group, an alkynylene group, an alkynylenedioxy group, an arylene group or an arylenedioxy group; provided that at least one of R_1 to R_6 , and X has an unsaturated bond.



wherein R_7 represents an alkenyl group having 2 to 10 carbon atoms; R_8 and R_9 each represent an alkyl group having 1 to 10 carbon atoms, an alkoxy group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms or a halogen atom; and X represents a halogen atom.

12. The nonaqueous electrolyte composition according to claim 1, 2, 4 or 8, further comprising at least one member selected from a silicon compound represented by the general formula (1) and a silicon compound represented by the general formula (2).

13. The nonaqueous electrolyte composition according to claim 1, 2, 5 or 9, further

comprising at least one member selected from a silicon compound represented by the general formula (1) and a silicon compound represented by the general formula (2).

14. The nonaqueous electrolyte composition according to claim 1, 2, 6 or 10, further comprising at least one member selected from a silicon compound represented by the general formula (1) and a silicon compound represented by the general formula (2).

15. A nonaqueous electrolyte secondary battery comprising a nonaqueous electrolyte, a positive electrode, and a negative electrode, the nonaqueous electrolyte being the nonaqueous electrolyte composition according to claim 1, 2, 3, 7 or 11.

16. A nonaqueous electrolyte secondary battery comprising a nonaqueous electrolyte, a positive electrode, and a negative electrode, the nonaqueous electrolyte being the nonaqueous electrolyte composition according to claim 1, 2, 4, 8 or 12.

17. A nonaqueous electrolyte secondary battery comprising a nonaqueous electrolyte, a positive electrode, and a negative electrode, the nonaqueous electrolyte being the nonaqueous electrolyte composition according to claim 1, 2, 5, 9 or 13.

18. A nonaqueous electrolyte secondary battery comprising a nonaqueous electrolyte, a positive electrode, and a negative electrode, the nonaqueous electrolyte being the nonaqueous electrolyte composition according to claim 1, 2, 6, 10 or 14.